

DOCKETED

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The CEC also allows options for the RPS eligibility of facilities that use multiple fuels to generate electricity. LADWP's gas-fired generating units capable of burning a mixture of biogas and conventional natural gas fall under the multi-fuel designation. Additionally, the CEC Guidebook states, "...only the renewable portion of [multi-fuel facilities'] generation will count as RPS eligible, and only when the Energy Commission approves a method to measure the renewable portion." The method to determine the renewable portion of the RPS-eligible energy generated in multi-fuel facilities is described on page 20 of the CEC Guidebook (see Appendix A).

RPS Energy Measurement Methodology

According to the CEC Guidebook, the amount of RPS-eligible electricity produced shall be calculated by multiplying the generation of the facility, measured in megawatt-hours (MWh), by the ratio of the quantity of biogas used to the quantity of total gas (biogas plus conventional natural gas) used by the facility. Gas shall be measured in millions of British Thermal Units (MMBtu). Both the electricity generated and the quantity of gas used must be measured on a monthly basis.

Sample Calculations

The amount of eligible RPS-generated energy resulting from burning a mixture of biogas and conventional natural gas will be calculated as follows:

MWh generated per month multiplied by the ratio of the quantity of biogas used to the quantity of total gas (biogas plus conventional natural gas) used per month by the facility.

For example, Scattergood Generating Station generated 30,000 MWh in a particular month, the quantity of biogas burned was 75,000 MMBtu and the quantity of conventional natural gas burned was 110,000 MMBtu, then:

$$30,000 \times (75,000 / (75,000 + 110,000)) = 12,162 \text{ MWh of RPS energy.}$$

As an additional example, assume that the BTU amount of biogas injected into a natural gas transportation pipeline system is 10,000 MMBtu per day. LADWP then uses this amount in its most efficient generator, with an assumed seven MMBtu/MWh heat rate. The amount of RPS-eligible energy for the month is then:

$$10,000 \times 30 \times (1/7) = 42,857 \text{ MWh.}$$

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Example of Biogas Transaction Confirmation

For reference purposes, a typical Transaction Confirmation for Immediate Delivery of biogas between Seller and LADWP is attached (see Appendix B).

Appendices

Appendix A— California Energy Commission's Renewables Portfolio Standard Eligibility Guidebook, Third Edition, January 2008, pages 19-21.

Appendix B— Transaction Confirm between XXXX Energy and LADWP.

If you have any questions or need additional information, please contact Mr. Barry B. Dong at Extension 71203 or Mr. Robert M. Hodel at Extension 73802.

RH:ec

Attachments

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Appendix A

...net metering programs or tariffs approved by the CPUC or any POU, are considered distributed generation and may not be certified as RPS-eligible at this time.

6. Renewable Facilities Using Multiple Fuels

The Energy Commission will allow options for RPS-eligibility of renewable facilities that use multiple fuels or resources to generate electricity, such as co-fired fuels or a mix of fuels that includes fossil fuels. To count 100 percent of the electricity generated toward RPS obligations from such a multi-fuel facility, one of the following three conditions must be met.

1. If the annual fossil fuel use at the facility does NOT exceed a *de minimus* amount, then 100 percent of the electricity production from the facility may count as RPS eligible. *De minimus* for facilities seeking RPS eligibility is 2 percent of all fuels used and measured on an annual total energy input basis. Note that *de minimus* for facilities seeking RPS eligibility and funding under the Energy Commission's Existing Renewable Facilities Program is 5 percent of all fuels used and measured on an annual energy input basis.
2. In the past, the Energy Commission's Renewable Energy Program provided that renewable facilities using fossil fuels were eligible for funding as long as the percentage of fossil fuel used did not exceed 25 percent of the total energy input of the facility during a given calendar year. The Energy Commission will provide the same treatment under the RPS for renewable facilities that commenced commercial operations before January 1, 2002, were certified and operational as a renewable qualifying small power production facility (QF) pursuant to the federal Public Utility Regulatory Policies Act before January 1, 2002, and are currently certified as a renewable QF facility.
3. Any facility that is developed and awarded a power purchase contract as a result of a 2002/2003 Interim RPS procurement solicitation approved by the CPUC under Decision 02-08-071 and Decision 02-10-062 may use up to 25 percent fossil fuel, measured on an annual total energy input basis, and count 100 percent of the electricity generated as RPS-eligible. The Energy Commission may allow multi-fuel facilities that do not meet one of the above criteria to be certified as RPS-eligible, but only the renewable portion of their generation will count as RPS eligible, and only when the Energy Commission approves a method to measure the renewable portion. An applicant for RPS pre-certification or certification of such a facility must submit with its application for RPS pre-certification or certification a proposal for an appropriate method to measure the renewable fraction of the facility's generation. The measurement should be based on the total annual energy input of the fuels. The Energy

Commission will evaluate and consider the proposed method as part of the facility's application for pre-certification or certification.

If a facility meets the above criteria, the Energy Commission will certify or pre-certify the facility as the fuel type of the renewable fuel used. For example, if a solar thermal electric facility is co-fired with natural gas (fossil fuel use must meet the criteria of the Public Utility Regulatory Policies Act [PURPA] including not to exceed 25 percent of the fuel use), then the facility will be certified as "solar thermal electric." To participate in the RPS, the multi-fuel facility must be registered in the WREGIS accounting system and comply with WREGIS' requirements, including those for metering, and for reporting and updating the renewable portion of the fuel mix.

- Biogas Injected into a Natural Gas Pipeline

RPS-eligible biogas (gas derived from RPS-eligible fuel such as biomass or digester gas) injected into a natural gas transportation pipeline system and delivered into California for use in an RPS-certified multi-fuel facility may result in the generation of RPS-eligible electricity. The biogas must meet strict heat content and quality requirements within a narrow band of tolerance to qualify as pipeline-grade gas.

Quantifying RPS-eligible energy production requires accurate metering of the volume of biogas injected into the transportation pipeline system and the measured heat content of the injected gas. Although blending the biogas into the transportation pipeline system mixes the biogas with other pipeline gas, natural gas regulations require gas entering the system to be "nominated" for use at a specific power plant or to a pipeline system owned by a publicly owned utility or other load-serving entity (LSE). Consequently, the amount and energy content of the biogas or other RPS-eligible gas produced can be measured and either nominated for use at a specific power plant or nominated to a pipeline system owned by an LSE. If the biogas is nominated to a pipeline system, the owner of the system must designate the facility in which the biogas will be used.

The operator of a facility to which biogas is nominated (or designated) must certify its facility as RPS-eligible, recognizing that the facility will use a blend of RPS-eligible and ineligible fuel. The amount of RPS-eligible electricity produced shall be calculated by multiplying the generation of the facility (MWh) by the ratio of the biogas used and the total gas (biogas and natural gas) used by the facility. The electricity generated and gas used must be measured over an equal period (such as MWh produced per month and gas used per month).

Any production or acquisition of gas that is directly supplied to the gas transportation pipeline system and used to produce electricity may generate RPS-eligible electricity as follows:

1. The gas must be produced from an RPS-eligible resource, such as biomass or digester gas.
2. The gas must be injected into a natural gas pipeline system that is either within the WECC region or interconnected to a natural gas pipeline system in the WECC region that delivers gas into California.
3. The energy content produced and supplied to the transportation pipeline system must be measured on a monthly basis and reported annually, illustrated by month. Reporting shall be in units of energy (for example, MMBtu) based on metering of gas volume and adjustment for measured heat content per volume of each gas). In addition, the total amount of gas used at the RPS-eligible facility must be reported in the same units measured over the same period, and the electricity production must be reported in MWh.
4. The gas must be used at a facility that has been certified as RPS-eligible. As part of the application for certification, the applicant must attest that the RPS-eligible gas will be nominated to that facility or nominated to the LSE-owned pipeline serving the designated facility.
5. In its annual RPS Procurement Verification report, the Energy Commission will calculate the RPS-eligible energy produced using the same methodology discussed above.

When applying for RPS pre-certification, certification, or renewal, the application must include the following: 1) an attestation from the multi-fuel facility operator of its intent to procure biogas fuel that meets RPS eligibility criteria, and 2) an attestation from the fuel supplier that the fuel meets eligibility requirements. In addition to the certification or pre-certification application, applicants for biogas facilities must complete a supplemental application form.

Appendix BTRANSACTION CONFIRMATION
FOR IMMEDIATE DELIVERY

EXHIBIT A

Seller Name	Date: XXXXX Transaction Confirmation #: _____	
<p>This Transaction Confirmation is subject to the NAESB Base Contract between Seller and Buyer dated 2/1/08. The terms of this Transaction Confirmation shall be binding upon execution by the parties. The Parties deem this Product a qualifying resource under the Buyer's RPS in effect as of the execution date of this Transaction Confirmation, and neither Party makes any further representation in this regard.</p>		
SELLER: Seller Name Address Attn: Contract Administration Phone: Fax: Base Contract No. Transporter: _____ Transporter Contract Number:	BUYER: Los Angeles Department of Water and Power ("LADWP") Energy Control Center 111 North Hope Street, Room 1148 Los Angeles, CA 90012 Attn: Brad Packer Phone: 818-771-6555 Fax: 818-771-6510 Transporter: Transporter Contract Numbers:	
Contract Price: <u>Fixed price:</u> a) The Contract Price is \$ _____ per MMBtu for the quantity documented as metered and delivered from the designated Landfill(s) (see Attachment A) on a (daily, monthly) basis. b) The Contract Price is \$ _____ per MMBtu for the quantity delivered of Standard Baseload gas on a (daily/monthly) basis that is in excess of documented metered and delivered gas from designated Landfill(s).		
Delivery Period: Begin: XXXXX End: XXXXX		
Performance Obligation and Contract Quantity: Seller shall sell to Buyer, and Buyer shall purchase from Seller, up to xxxxx MMBtu per Day ("Contract Quantity") consisting of both Renewable Natural Gas and Standard Baseload gas as set forth in the Special Conditions.		
Firm (Fixed Quantity): XXXXX MMBtus/Day <input type="checkbox"/> EFP	Firm (Variable Quantity): _____ MMBtus/Day Minimum _____ MMBtus/Day Maximum subject to Section 4.2. at election of <input type="checkbox"/> Buyer or <input type="checkbox"/> Seller	Interruptible: Up to xxxxxx MMBtus/Day
Delivery Point(s): XXXX		

Appendix B—Transaction Confirm between XXXX Energy and LADWP

Special Conditions

General Terms and Conditions and Definitions:

Renewable Natural Gas ("RNG"): means gas produced from [the Project] that:

- (i) consists of pipeline-quality Landfill Gas, as that term is defined in the California Energy Commission's ("CEC") Renewable Energy Program Overall Program Guidebook (January 2008); and
- (ii) contains all the environmental attributes associated with the use of a pipeline quality Landfill Gas-derived fuel for the generation of electric power, but excluding (a) any federal or state tax credits associated with the collection, production, transfer or sale of such Landfill Gas (unless an amount equal to 115% of such tax credits are added to the purchase price for the Renewable Natural Gas and paid as earned), (b) any emission reduction credits required or available for the operation of a Landfill Gas processing facility at the Landfill to convert collected Landfill Gas to pipeline quality gas standards, and (c) any credits or payments associated with the reduction in or avoidance of Greenhouse Gas emissions at the Landfill, including emission reduction credits, verified emission reductions, voluntary emission reductions, offsets, allowances, voluntary carbon units, avoided compliance costs, emission rights and authorizations, and CO₂ reduction and sequestration. For purposes hereof, "Greenhouse Gas" means carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride, or any other substance or combination of substances that may become regulated or designated as Greenhouse Gases under any federal, state or local law or regulation, or any emission reduction registry, trading system, or reporting or reduction program for Greenhouse Gas emission reductions that is established, certified, maintained, or recognized by any international, governmental (including U.N., federal, state, or local agencies), or non-governmental agency from time to time, in each case measured in increments of one metric tonne of carbon dioxide equivalent.
- (iii) Standard Baseload gas is the positive difference between the amount of RNG and non-RNG gas delivered each (day/month).

Seller's Support of CEC Certification: Seller will provide the attestation required for the CEC pre-certification concerning the RNG supply together with other information requested by the CEC to facilitate certification of Buyer's [designated facility] as multi-fuel generator. Seller shall provide any additional documentation or information related to the supply of RNG, to the CEC or other applicable regulatory authority, as necessary to support Buyer's ongoing maintenance of CEC certification of its [designated facility] as an RPS-certified multi-fuel generator and to provide information needed from time to time to demonstrate compliance with the Buyer's RPS.

Reports, Invoices and Statements: Seller agrees to provide Buyer with a Monthly statement showing the amount of RNG and Standard Baseload gas comprising the previous Month's deliveries.

THIS PROPOSAL IS FOR DISCUSSION PURPOSES ONLY AND IS NOT INTENDED TO BE COMPLETE AND ALL INCLUSIVE OF THE TERMS AND CONDITIONS OF THE RELATED TRANSACTION(S). THIS PROPOSAL IS NOT AN OFFER, A SOLICITATION OF AN OFFER OR A COMMITMENT OF SHELL ENERGY NORTH AMERICA OR ANY PARENT OR AFFILIATE OF SHELL ENERGY NORTH AMERICA THE TRANSACTION DESCRIBED HEREIN IS SUBJECT TO FURTHER REVIEW AND APPROVAL OF SHELL ENERGY NORTH AMERICA AND EXECUTION OF DEFINITIVE AGREEMENTS CONTAINING ALL APPROPRIATE PROVISIONS, INCLUDING THOSE RELATING TO CREDIT AND LIMITATION OF DAMAGES. THIS PROPOSAL DOES NOT PURPORT TO IDENTIFY OR SUGGEST ANY OR ALL OF THE RISKS (DIRECT OR INDIRECT) WHICH MAY BE ASSOCIATED WITH THE PROPOSED TRANSACTION(S). AS THE INFORMATION CONTAINED HEREIN IS PROPRIETARY, PLEASE KEEP THIS MATERIAL

Appendix B—Transaction Confirm between XXXX Energy and LADWP

CONFIDENTIAL. [The signature boxes below may not be needed since signatures are provided for on the LADWP confirm sheet to which this Exhibit A is an attachment.]	
Seller: Seller Name	Buyer: Los Angeles Department of Water and Power
By: NOT FOR EXECUTION	By: NOT FOR EXECUTION
Title: _____	Title: _____
Date: _____	Date: _____

EXHIBIT-A (attached to Appendix B)

[Project Description & Map; Attestation Forms]

- (1) Landfill A – to be populated at a later date.
- (2) Landfill B – to be populated at a later date.
- (3) Landfill C – to be populated at a later date.